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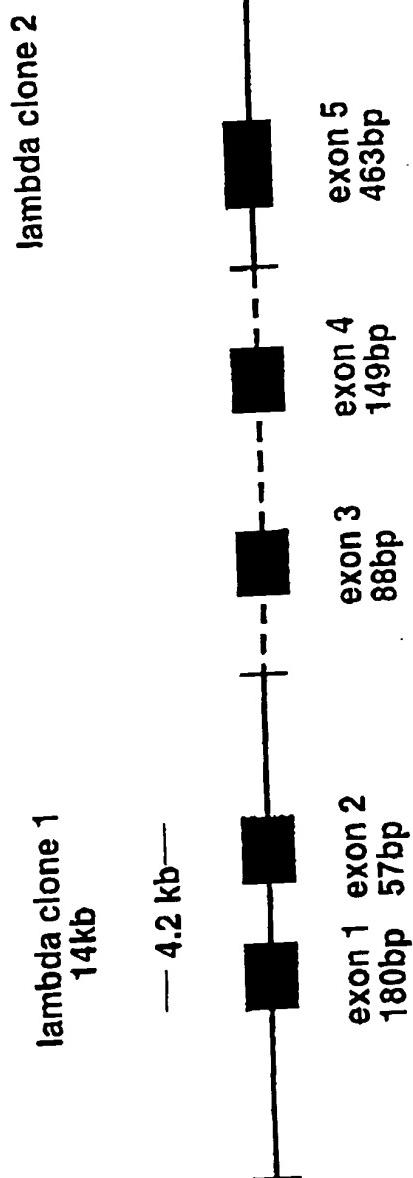


FIGURE 1

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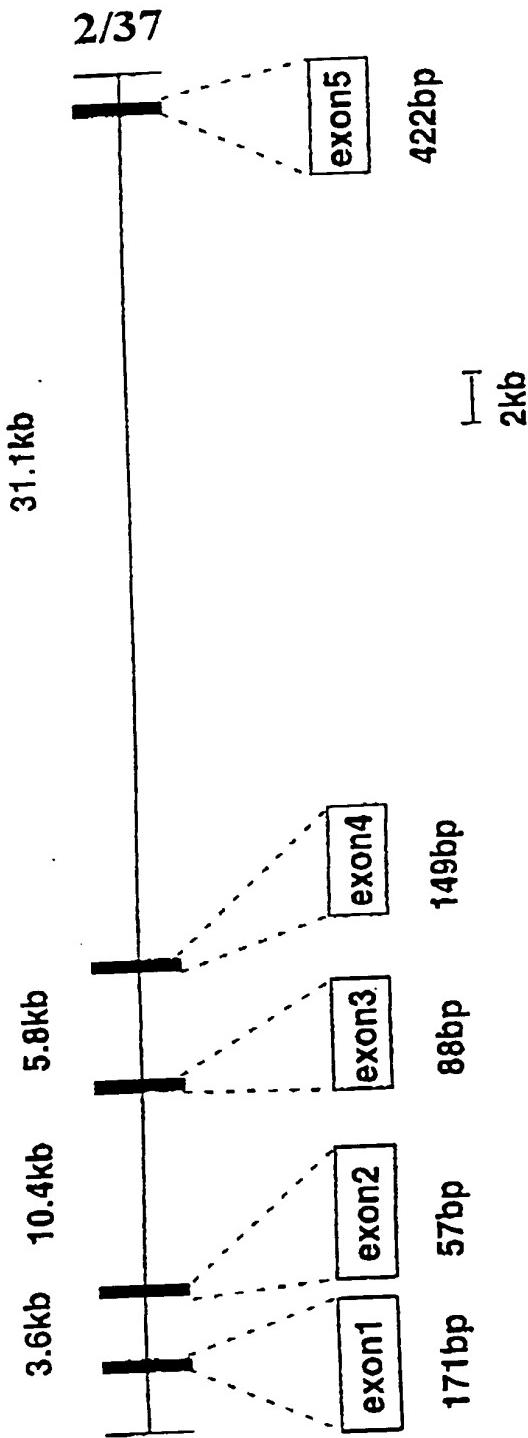


FIGURE 2

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Human Csl M S K Q P V S N V R A I Q A N I N I P N G A F R P G A G Q P P
 Mouse Csl M S K Q P I S N V R A I Q A N I N I P M G A F R P G A G Q P P
 Xenopus Csl M S K Q P A S N I R S I Q A N I N I P M G A F R P G A G Q P P

Human Csl R R K E C T P E V E E G V P P T - S D - - - E E K K P I P G
 Mouse Csl R R K E S T P E T E G A P T T - S - - - E E K K P I P G
 Xenopus Csl K R K E F S T E E - E Q H V P T P E S E E K S E E K K P I P G

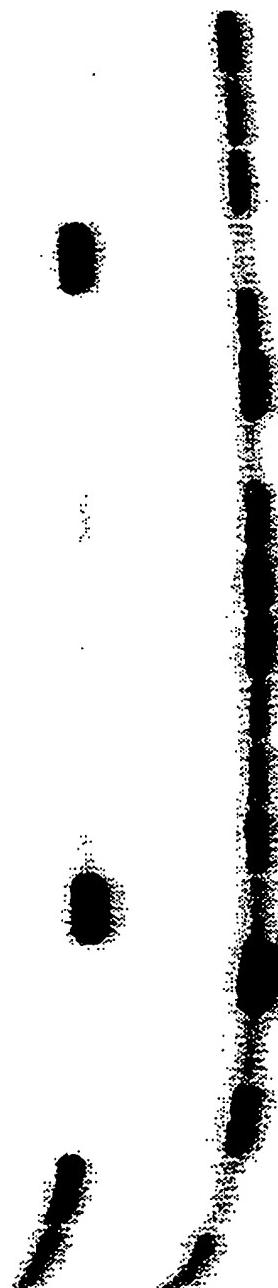
Human Csl A K K L P G P A V N L S E I Q N I K S E L K Y V P K A E Q .
 Mouse Csl M K K F P G P V V N L S E I Q N V K S E L K F V P K G E Q .
 Xenopus Csl A V K L P G P A F N L S E T .

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L.intestine
Uterus
Bladder
Sk.muscle
S.intestine
Kidney
Pancreas
Testes
Ovary
Spleen
Stomach
Liver
Lung
Heart
Thymus
S.gland
Brain
Tongue
Skull



Csi
Cyclo

FIGURE 4

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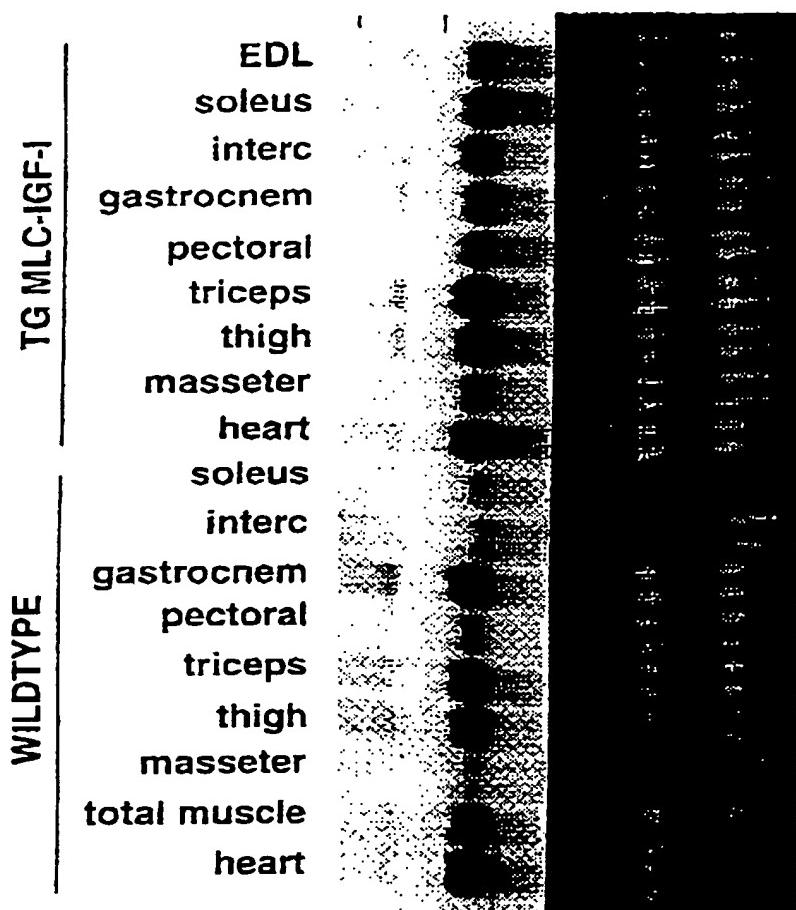


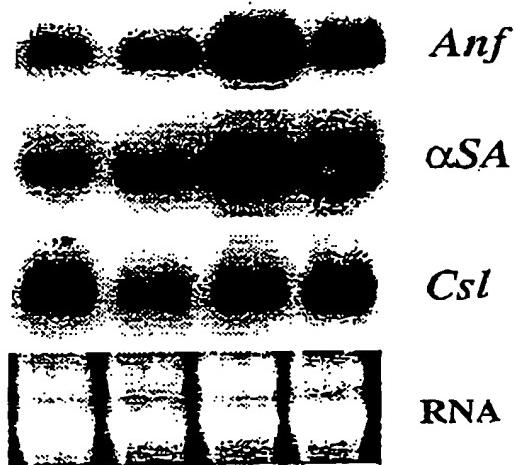
FIGURE 5

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1 2 3 4

**FIGURE 6**

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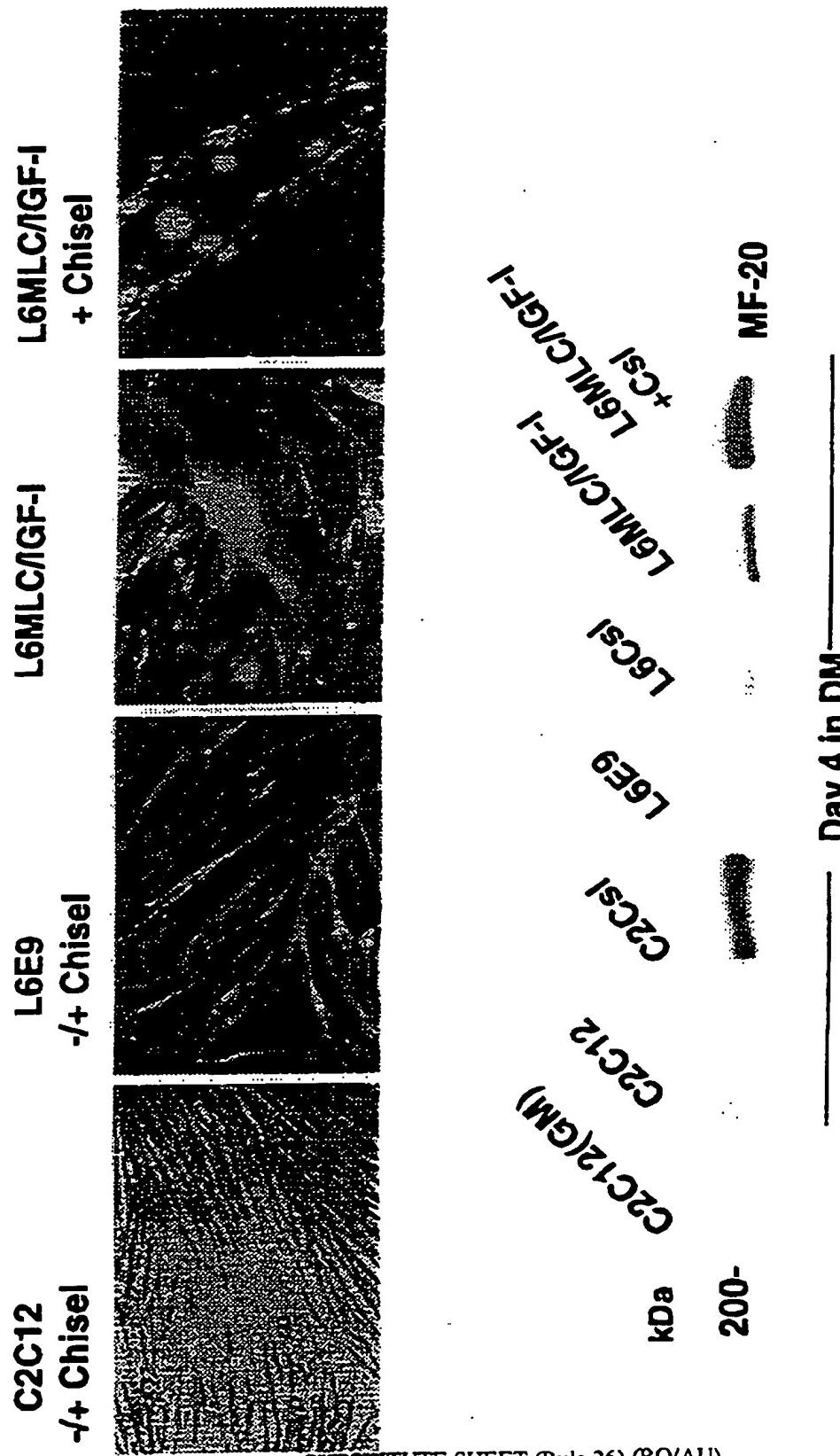


Figure 7

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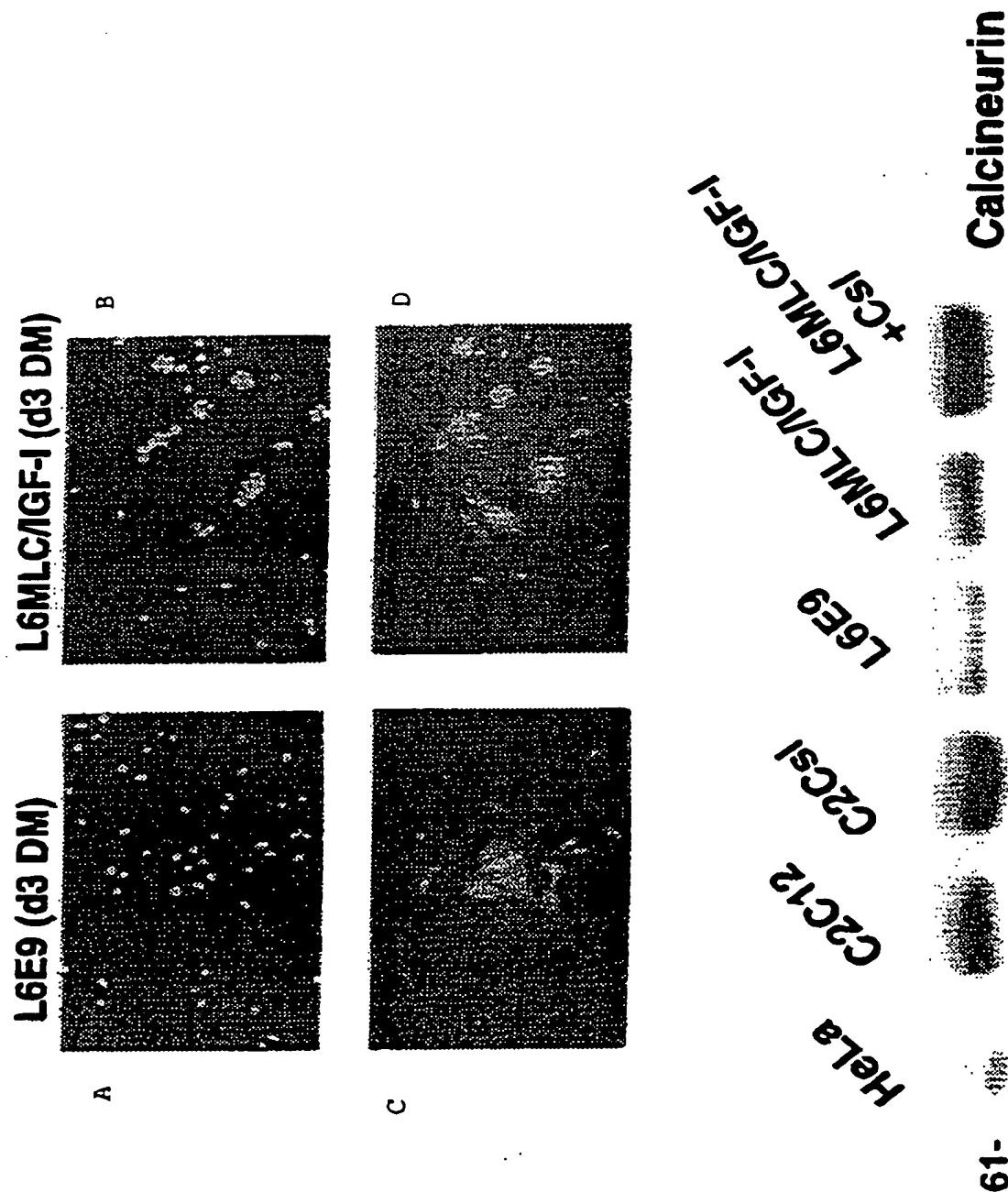


Figure 8

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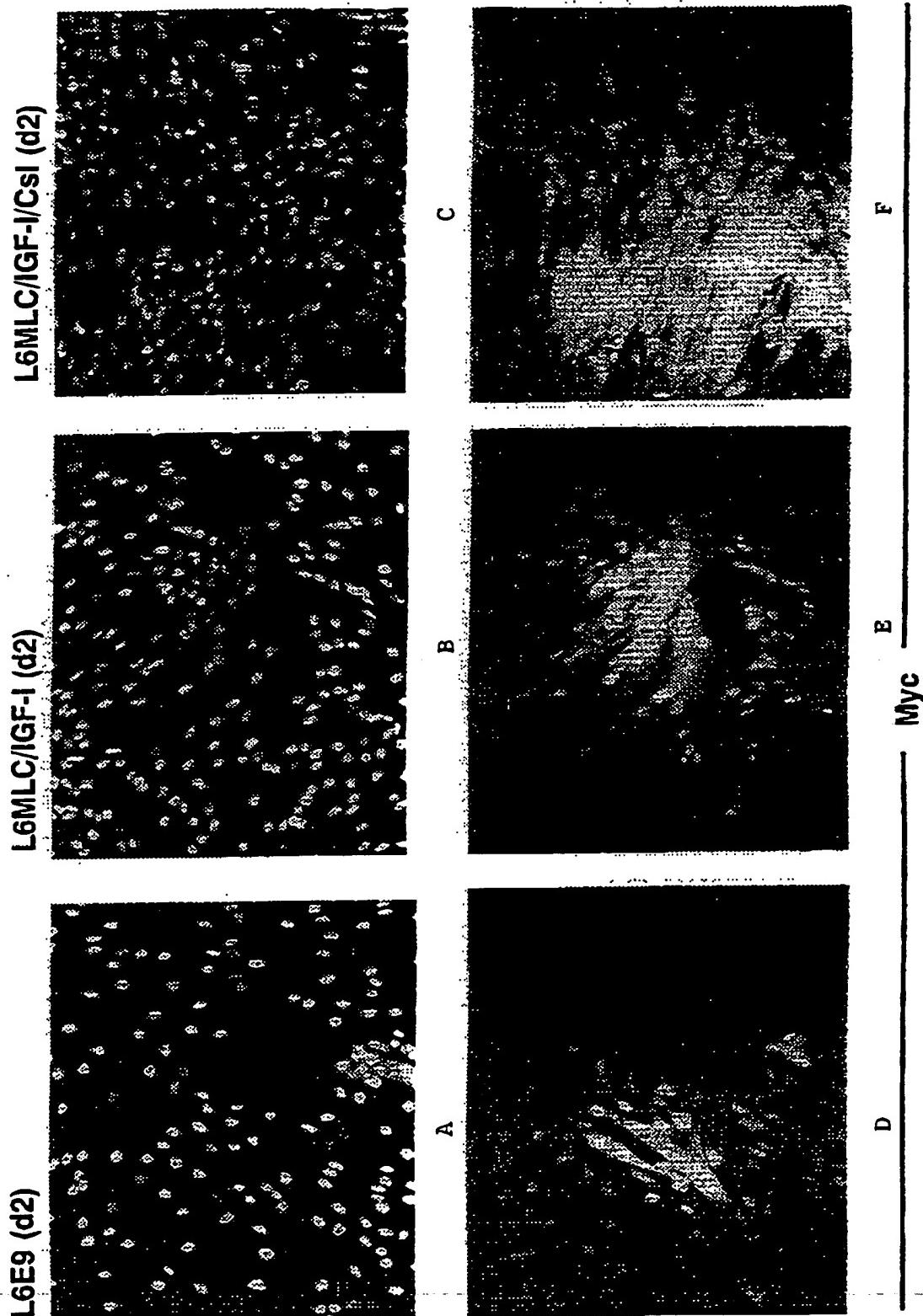


Figure 9

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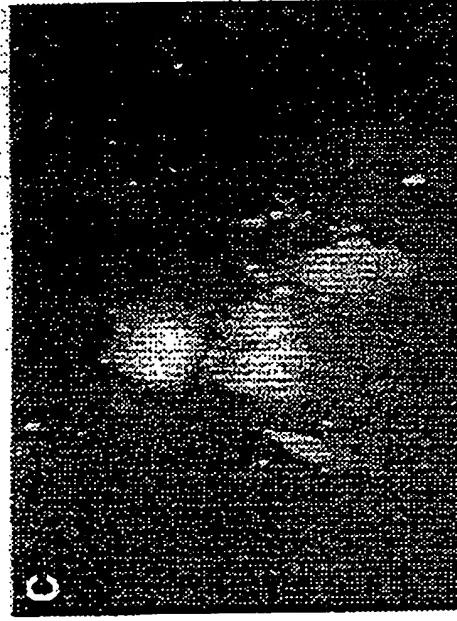
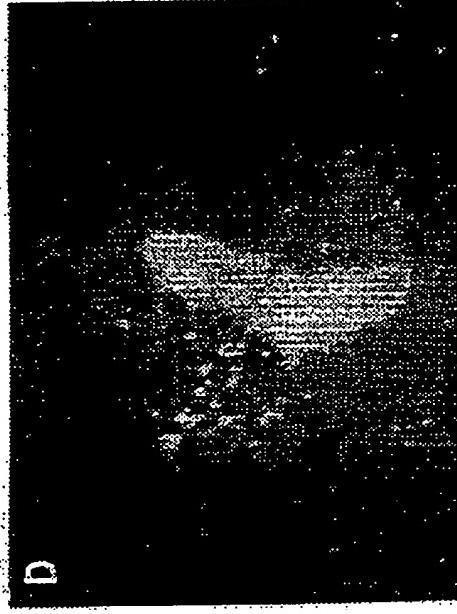
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L6MLC/IGF-I/CsI (d5)



L6MLC/IGF-I (d5)



Myc

Figure 10

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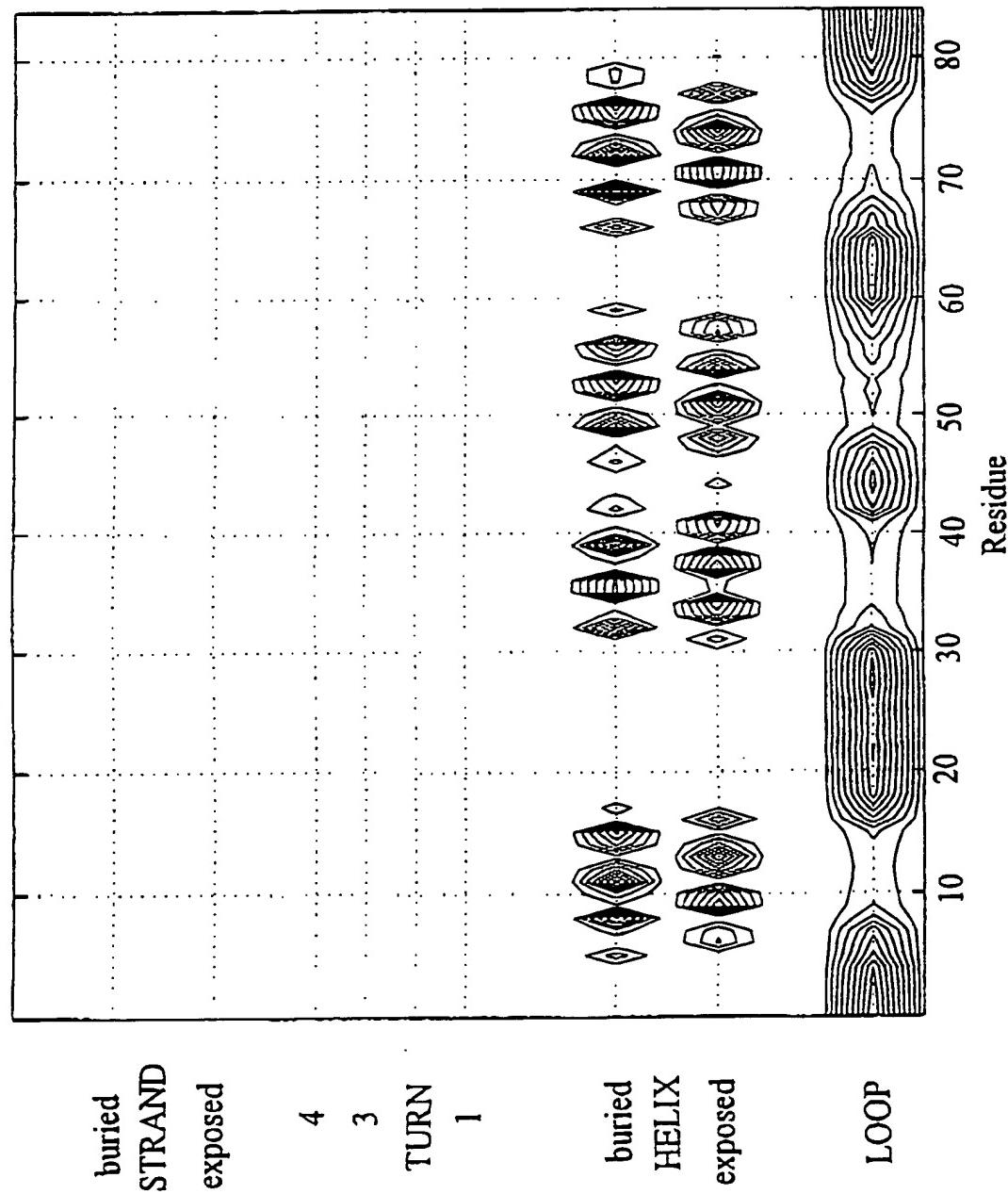


FIGURE 11

BMEC Protein Sequence Analysis System
<http://bmerc-www.bu.edu/psa/about.htm>

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Incomplete IQ Site



Scallop MHC (R-MLC site) : SVIQRNIRKVNVLRLNQWNWKLYSKVKPLLSIARQEEEMKE
 rat cardiac MHC (R-MLC site) : LVIQWMNIRAFMGVKNWPWMMKLYFKIKPLKSAETEKEMAN
 rat skeletal MHC (R-MLC site) : FCIQYNIRAFMNVKHWPWMMKLFKIKPLKSAETEKEMAT
 CALCINEURIN A (CnB site) : ENNVMNIROFNCSPHPYWLPNFMDVFTWSLPPFVGKRVTE

CONSENSUS: IQxxIR WxxxYxxV

A

A

CALCINEURIN A mutations
with reduced CnB binding:

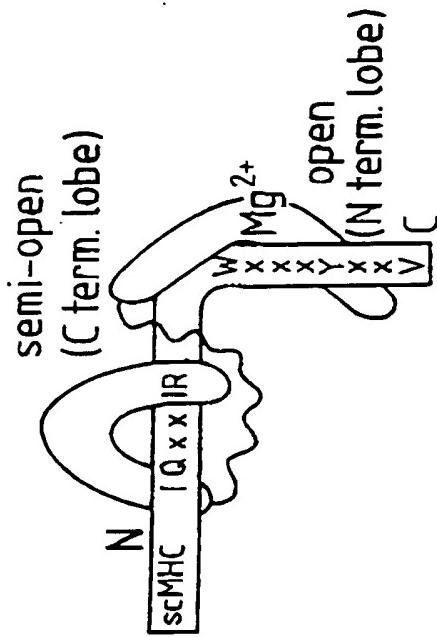


FIGURE 12

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Non-IQ Site

<u>CaM Binding Sites</u>	
CALCINEURIN A:	SEEDGFDGATAAARRKEVIRWKIRAIKGKMARVFSQLREESESV
SK MLCK (M13) :	KRRWKKNFIAWSAAANRFKKISSSGAL
Ca Pump (C24W) :	QILWFRGLNRIFTQIIVVNAFRSS
CALSPERMIN:	ARRKLKAALKAVVASSRLGS
MELLITIN:	GIGAVLKRVLTTGIPALISWIKRKRQQ

Binding to N-terminal lobe
 C →————— N

Binding to C-terminal lobe
 C ←————— N

CaM Binding Sites

SEEDGFDGATAAARRKEVIRWKIRAIKGKMARVFSQLREESESV
 KRRWKKNFIAWSAAANRFKKISSSGAL
 QILWFRGLNRIFTQIIVVNAFRSS
 ARRKLKAALKAVVASSRLGS
 GIGAVLKRVLTTGIPALISWIKRKRQQ

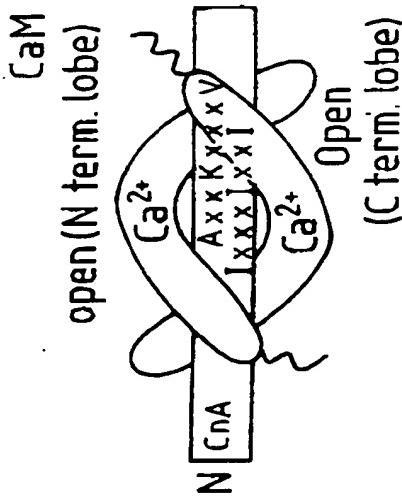


FIGURE 12

Alignments and binding modes taken from Houdusse and Cohen (1995) *PNAS* 92, 10644-10647 and Ikura et al. (1992) *Science* 256, 632-638.
 Calcineurin mutations found in Milan et al. (1994) *Cell* 79, 437-447.

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PAGE Analysis of Thrombin-Cleaved Bacterial GST-Chisel

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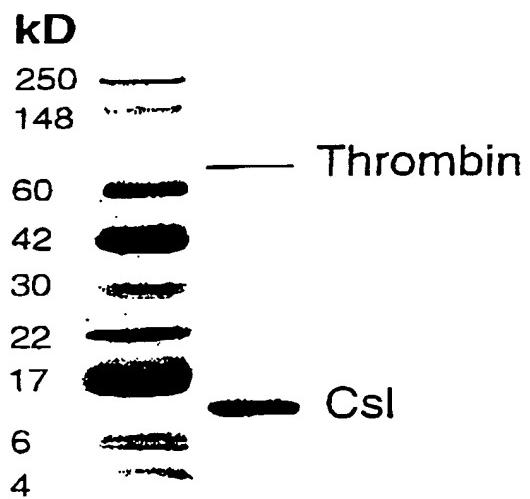


FIGURE 13

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Western Blot Analysis of COS Cell-Expressed and Bacterial Chisel with Native Chisel Antibody

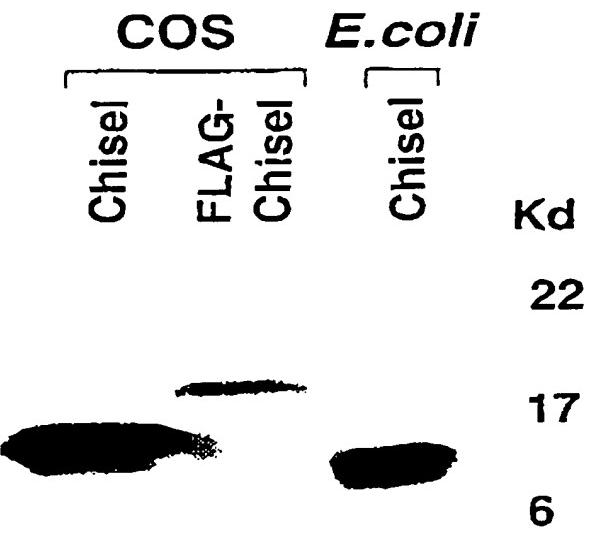


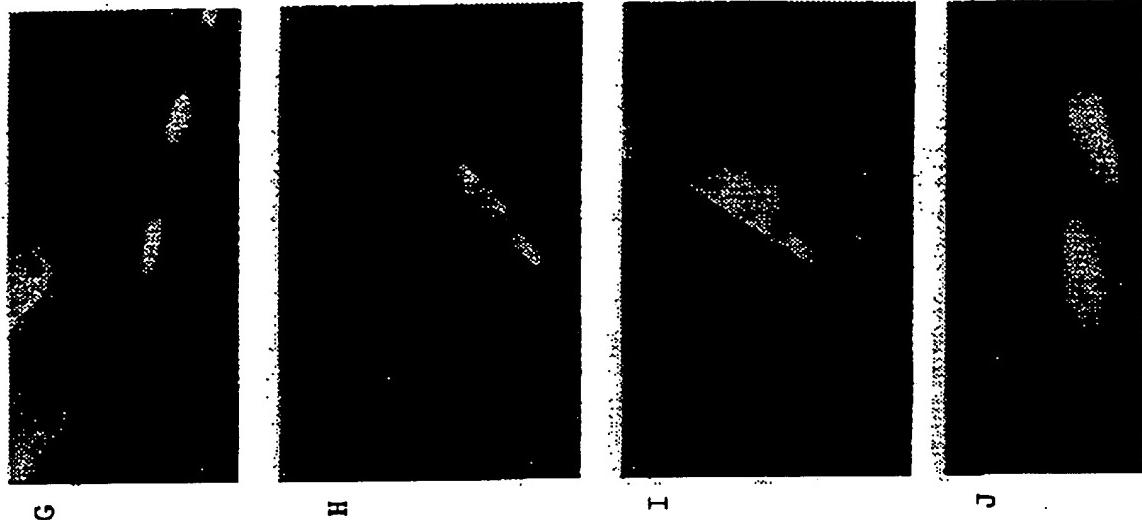
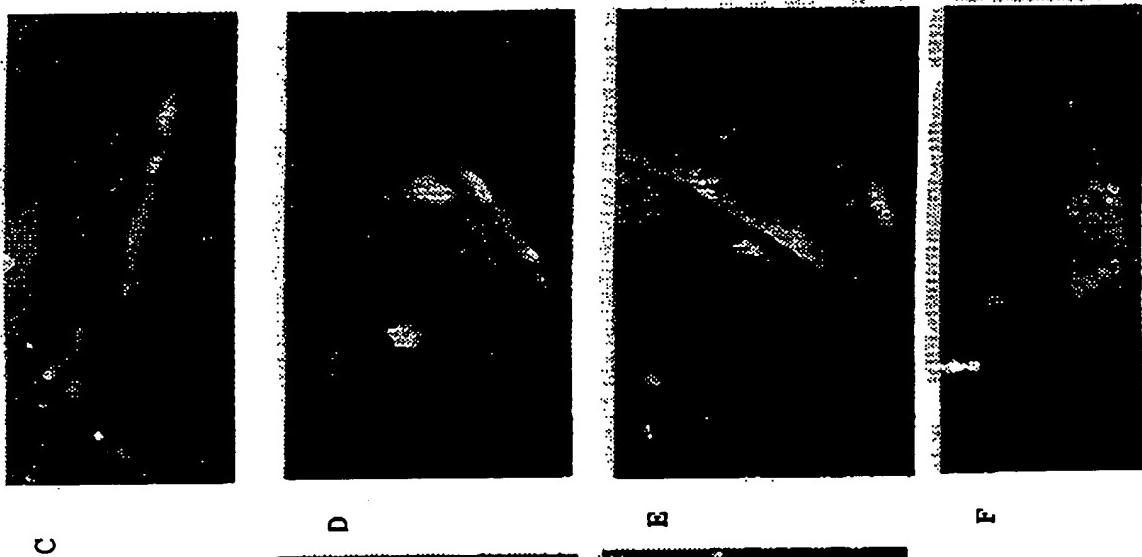
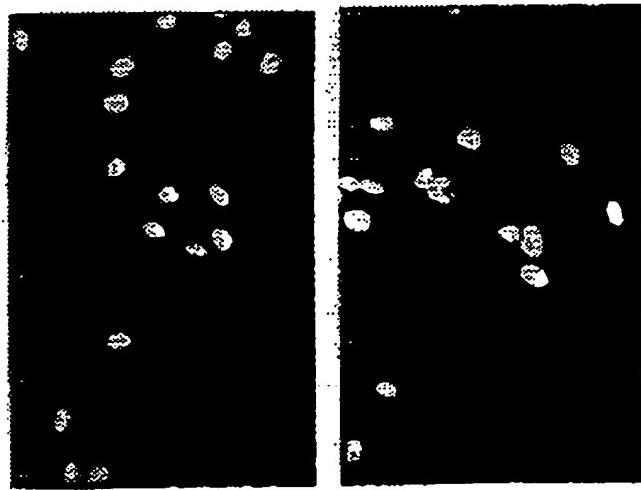
FIGURE 14

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MF-20**FLAG CHISEL****HOECHST****Figure 15**

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L6	L6/IGF	L6/CsI	L6/IGF CsI
G 0 1 2 3 7 G 0 1 2 3 7 G 0 1 2 3 7 G 0 1 2 3 7			

FIGURE 16

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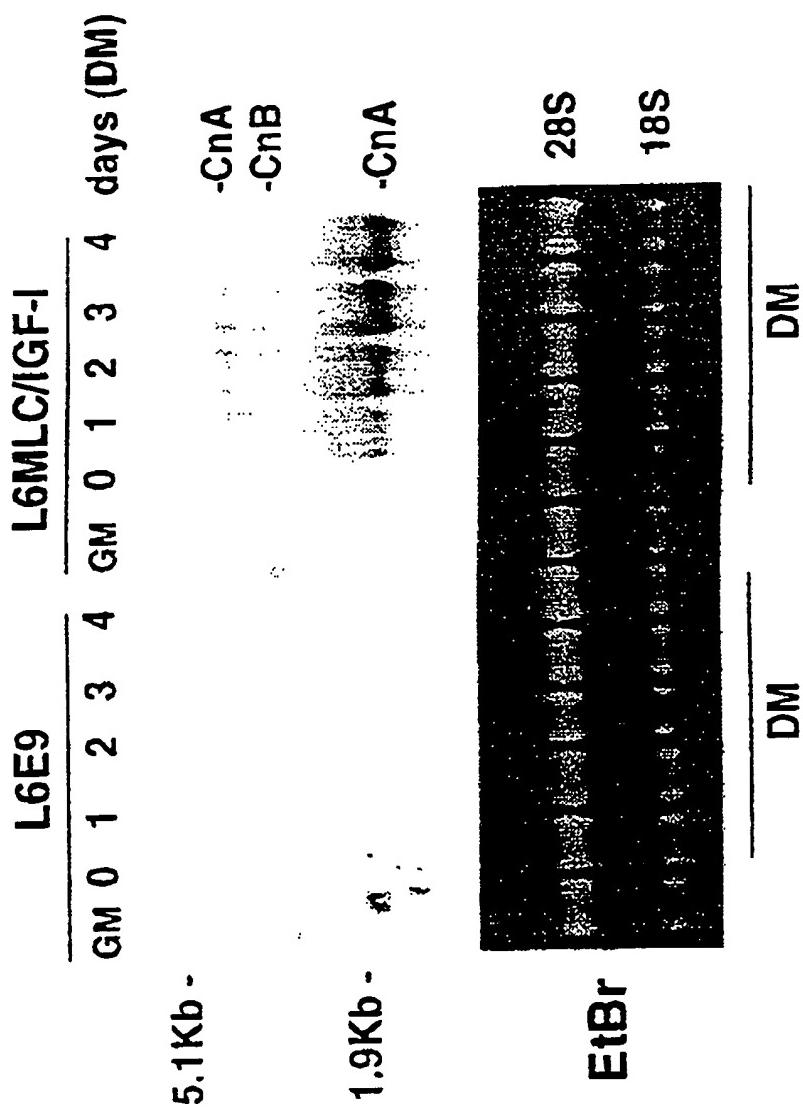


Figure 17 a

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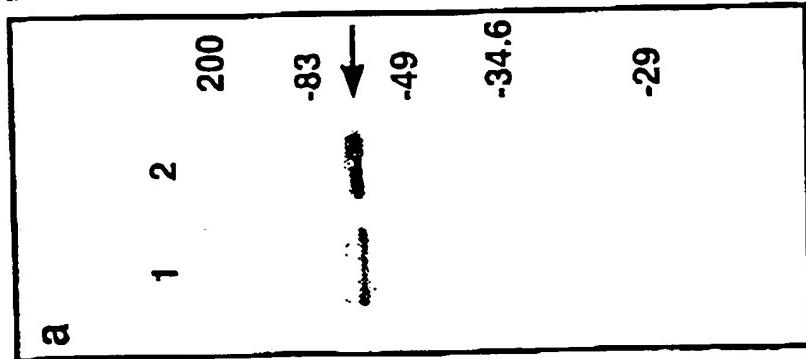
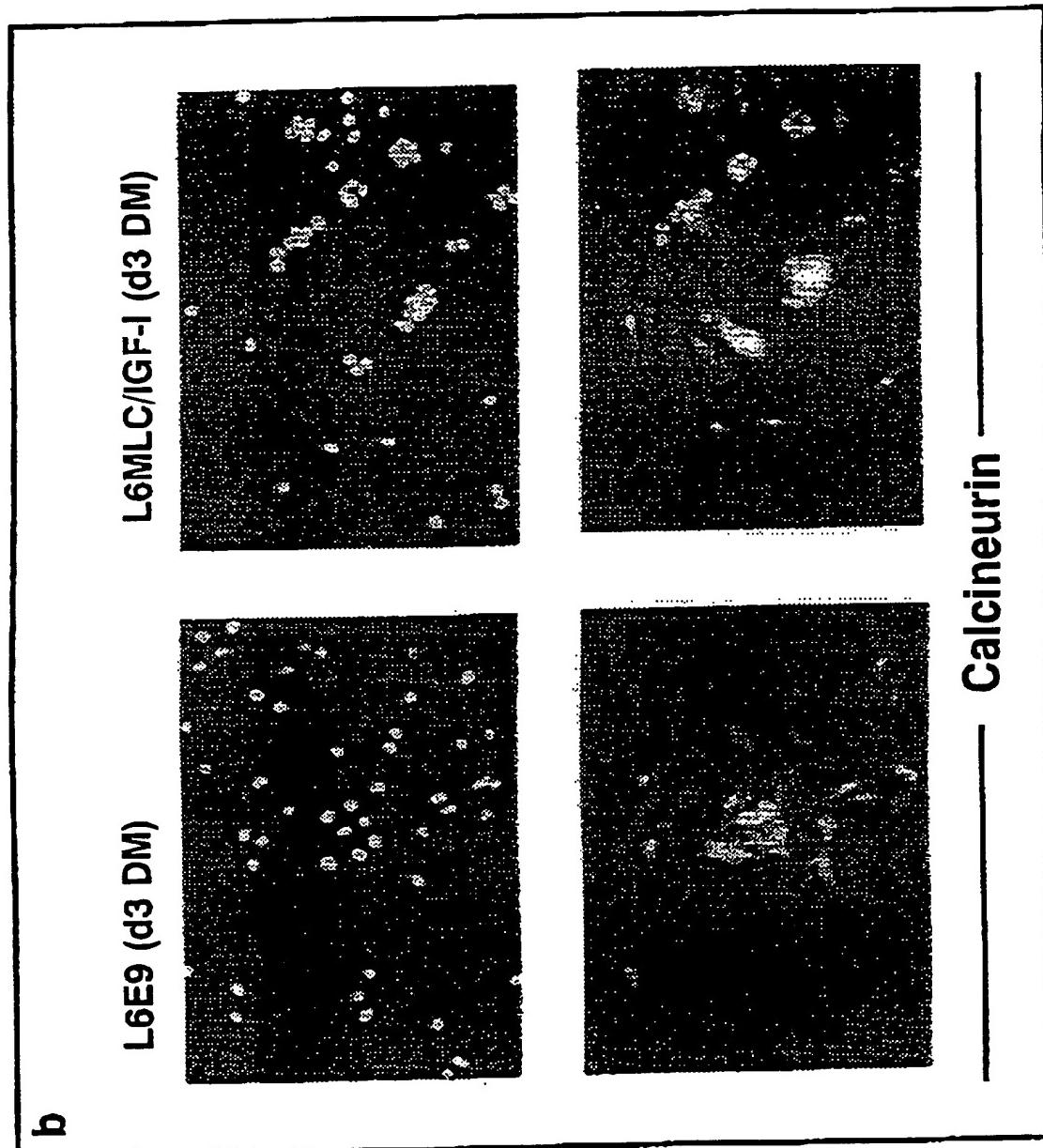


Figure 17b

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200 X

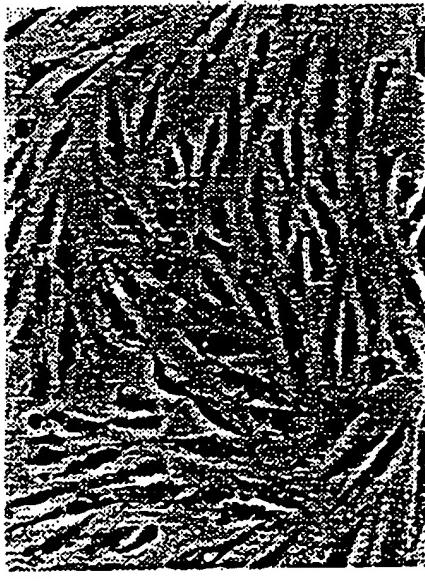
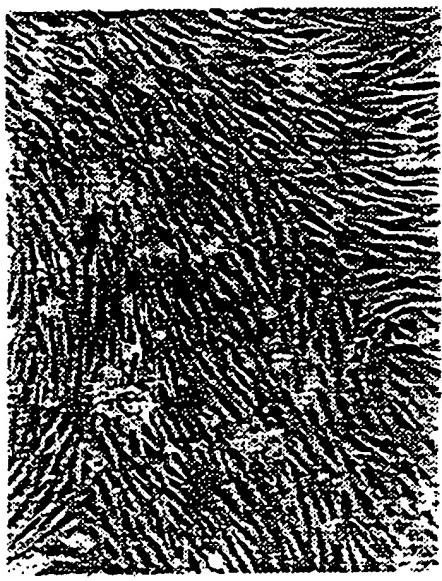


400 X



L6Myog/CnA (d2 DM)

L6E9 (d2 DM)



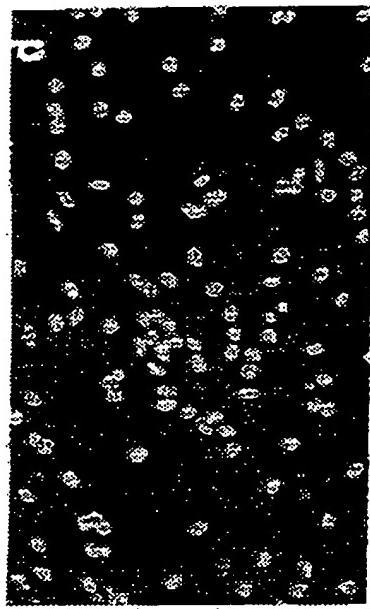
Davies Collision Cave

Figure 18a

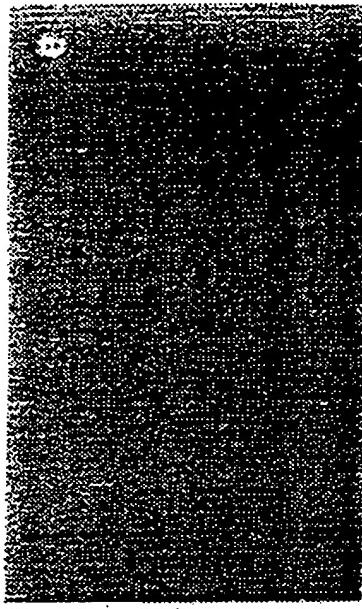
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Hoechst



HA



MF-20

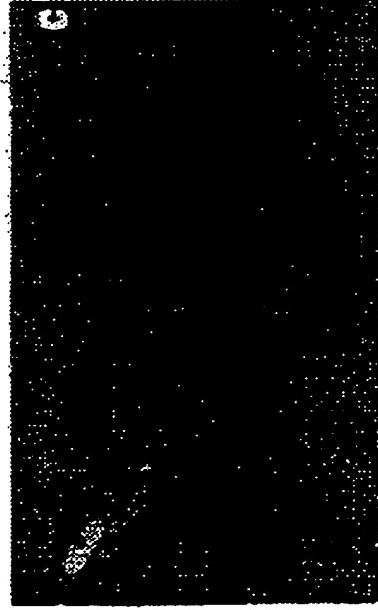
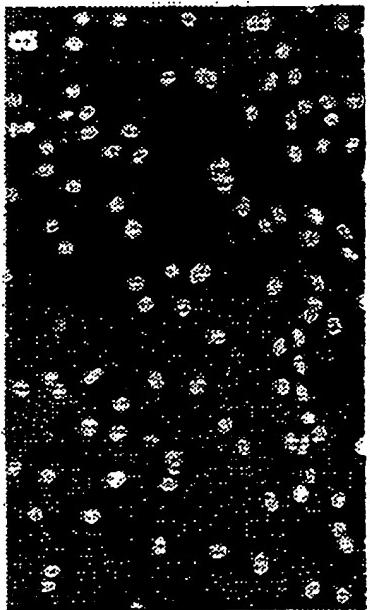


Figure 18b

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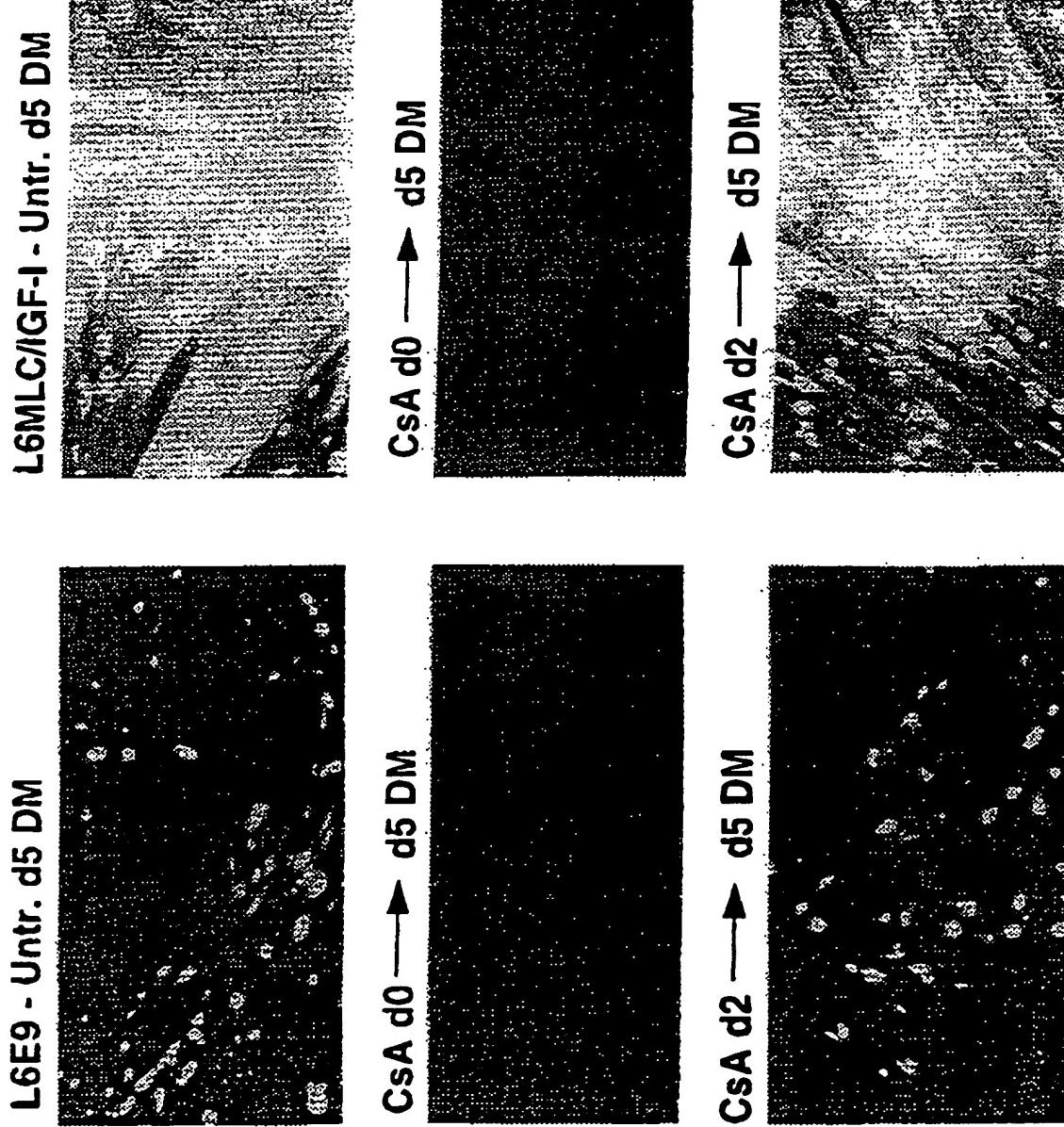


Figure 18c

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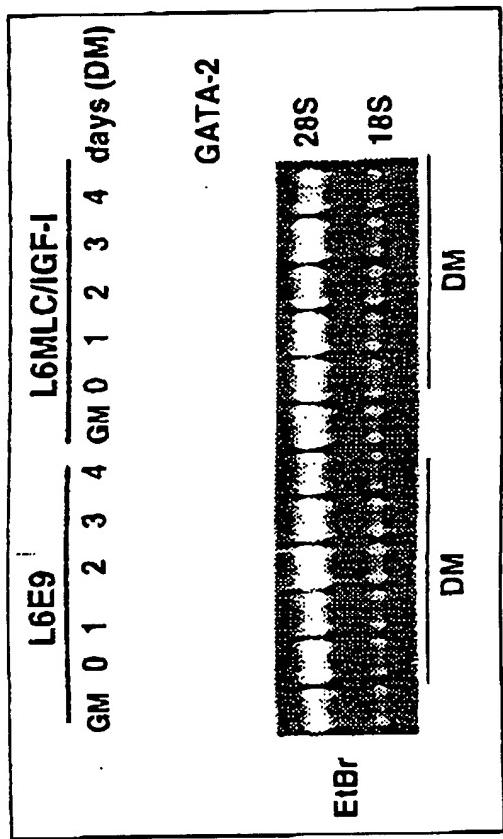


Figure 19a

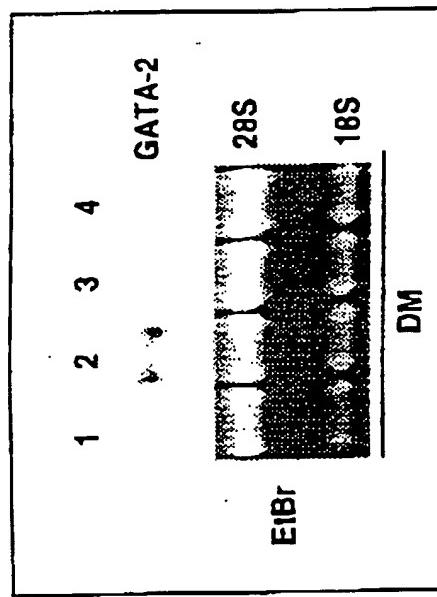


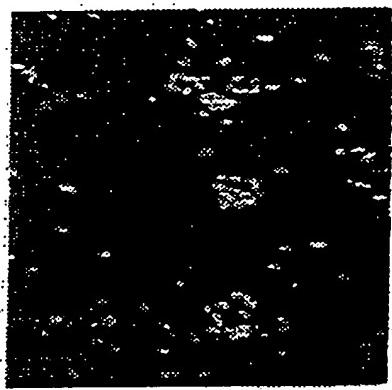
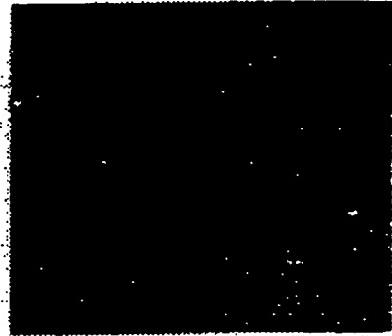
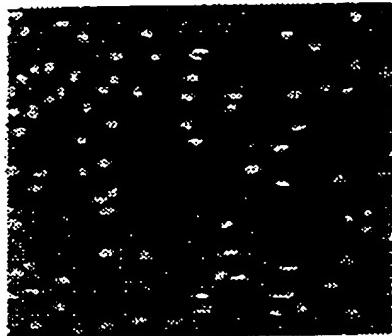
Figure 19b

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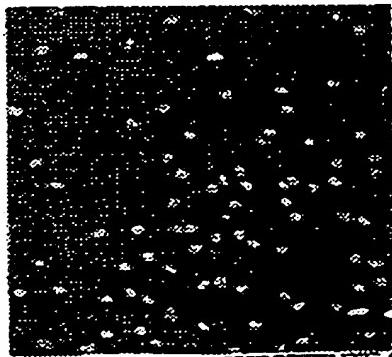
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L6MLC/IGF-I (d3 DM)



L6E9 (d3 DM)



GATA-2

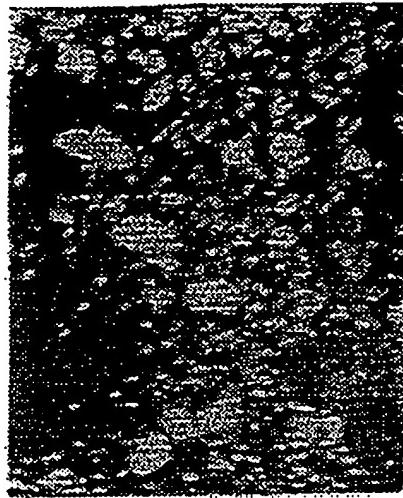
Figure 19c

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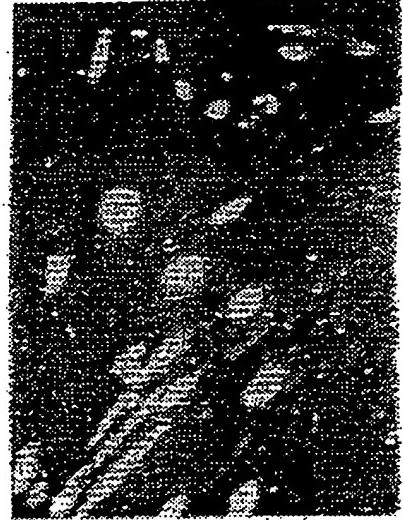
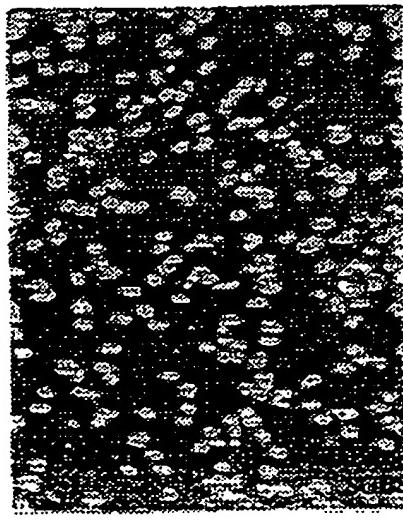
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L6Myog/CnA (d3 DM)



L6E9 (d3 DM)



GATA-2

Figure 19d

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Figure 20 a

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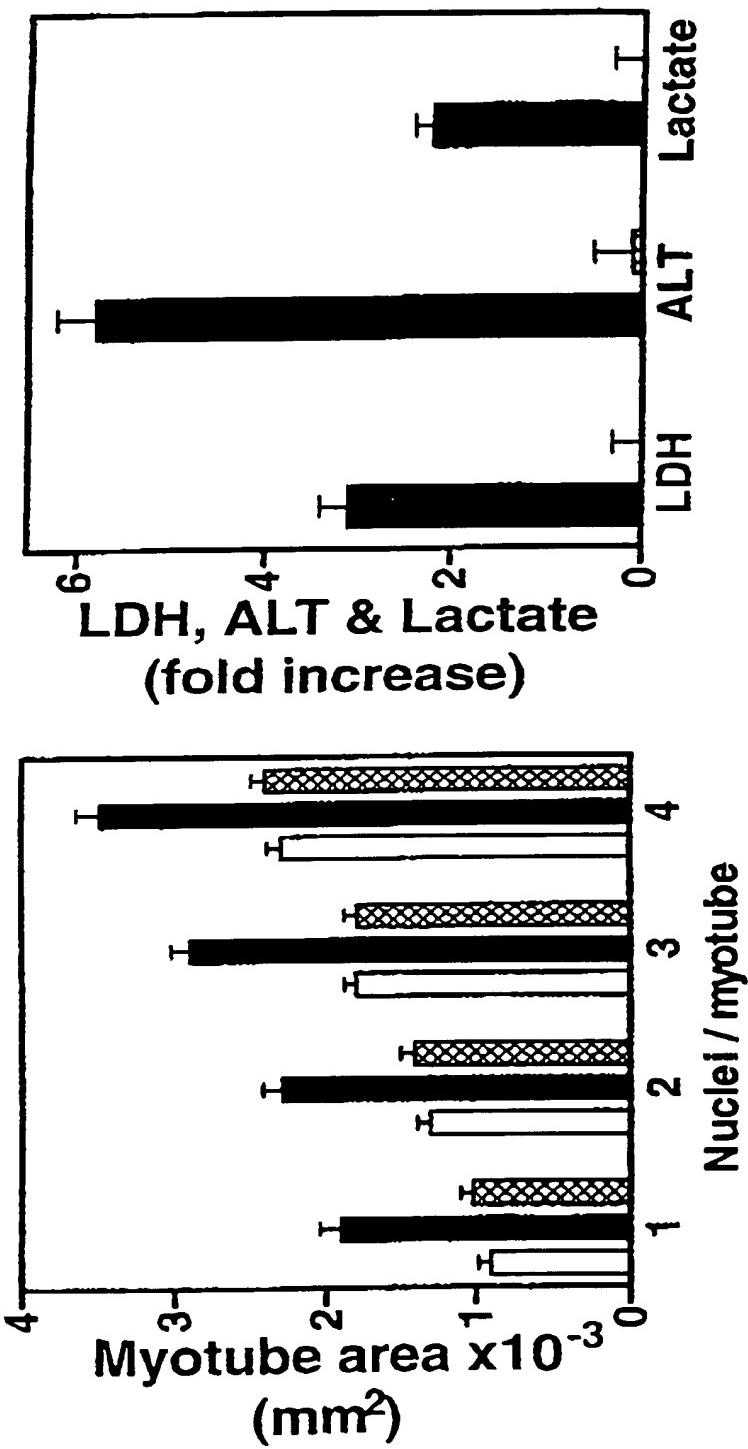


FIGURE 20B

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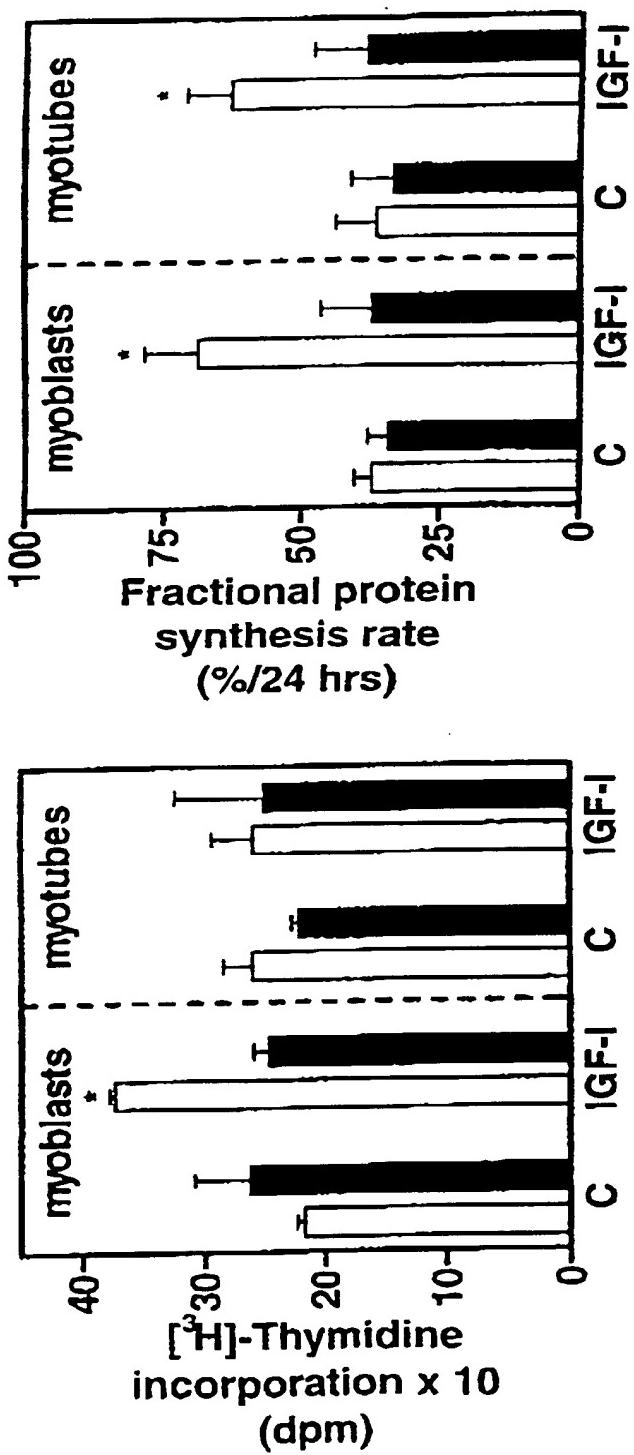


FIGURE 20C

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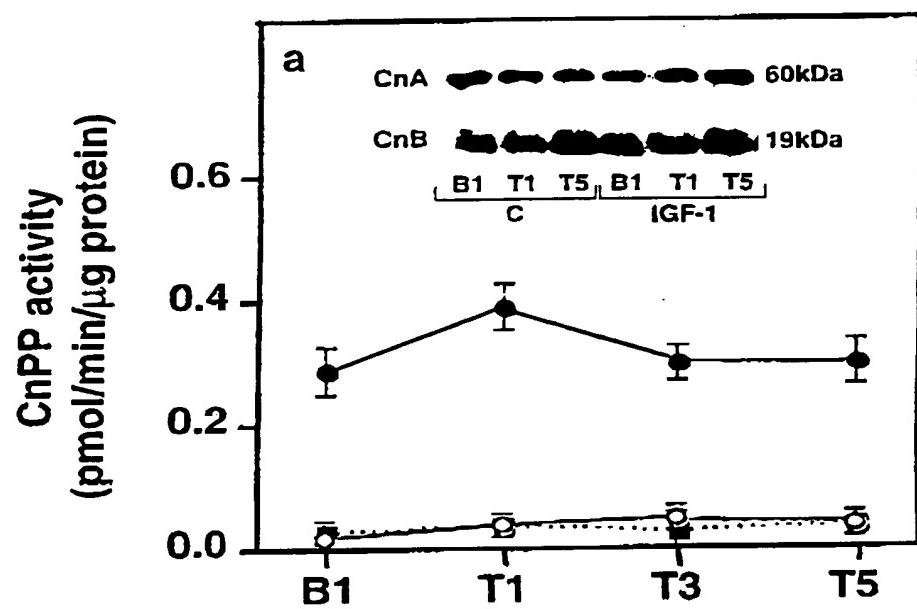


FIGURE 21

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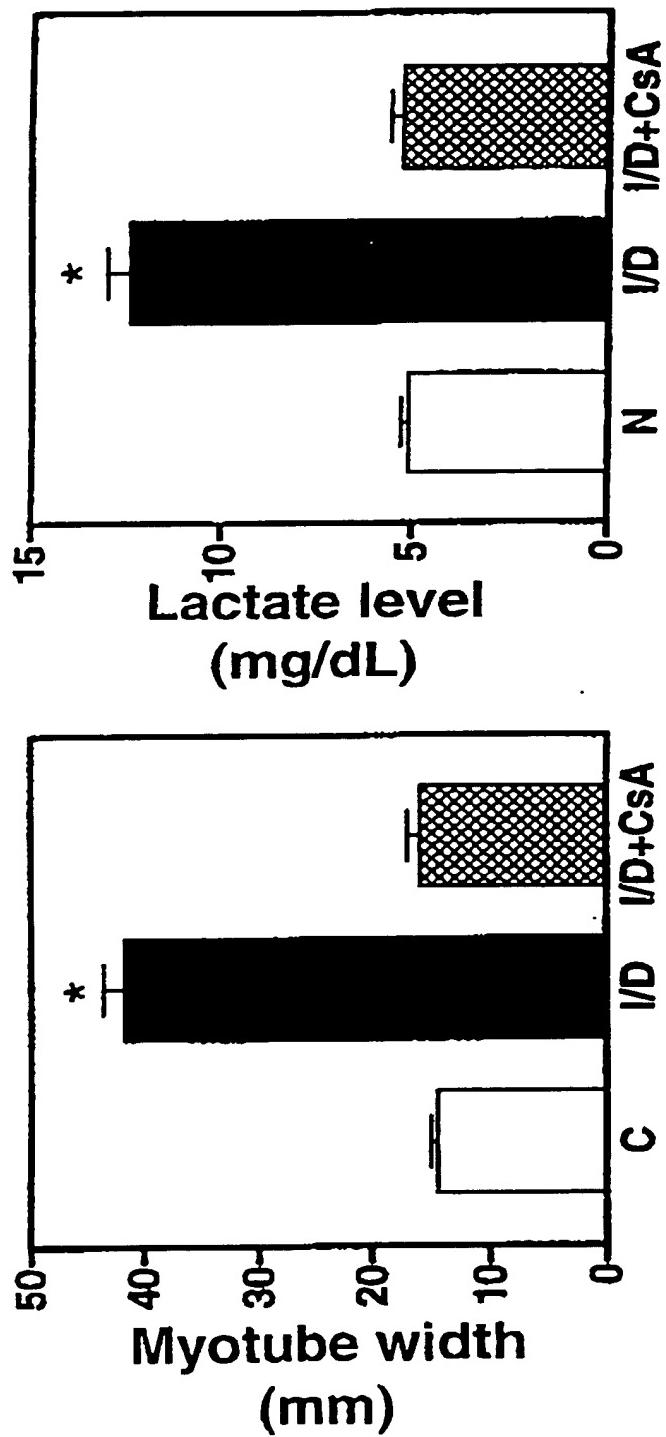


FIGURE 22A

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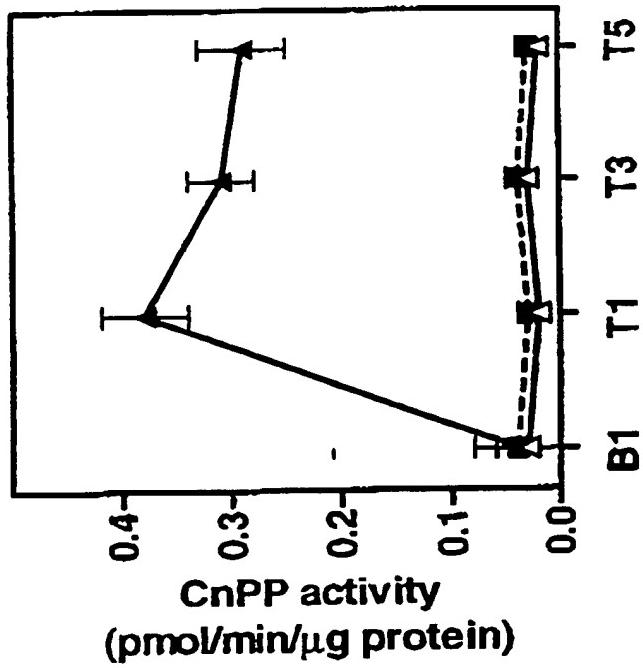
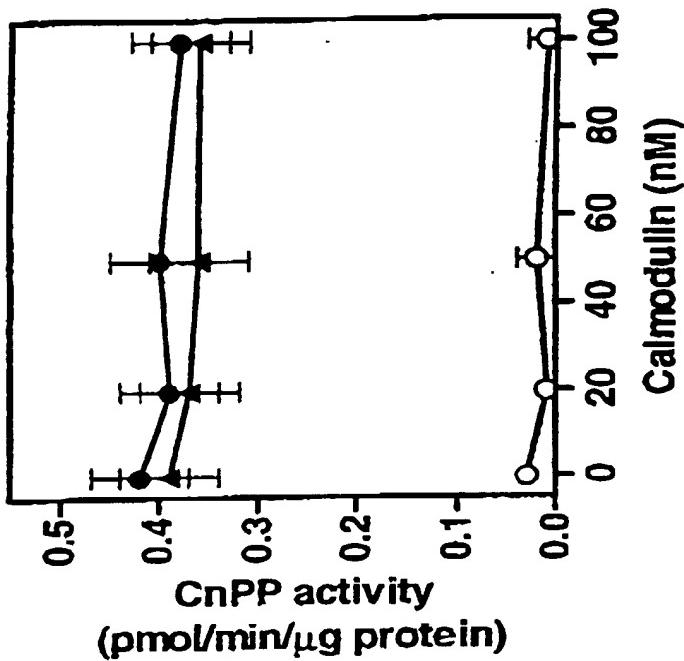


FIGURE 22B

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Figure 23 a

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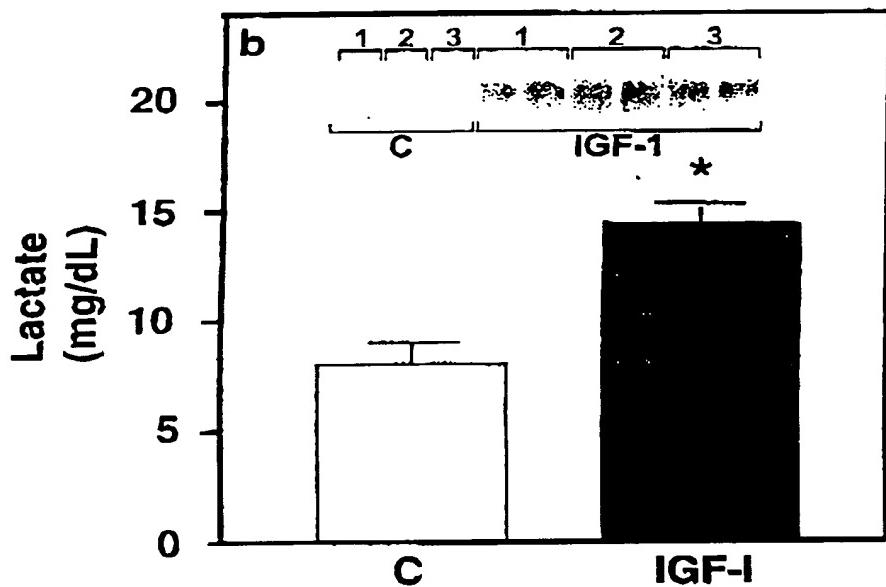


FIGURE 23B

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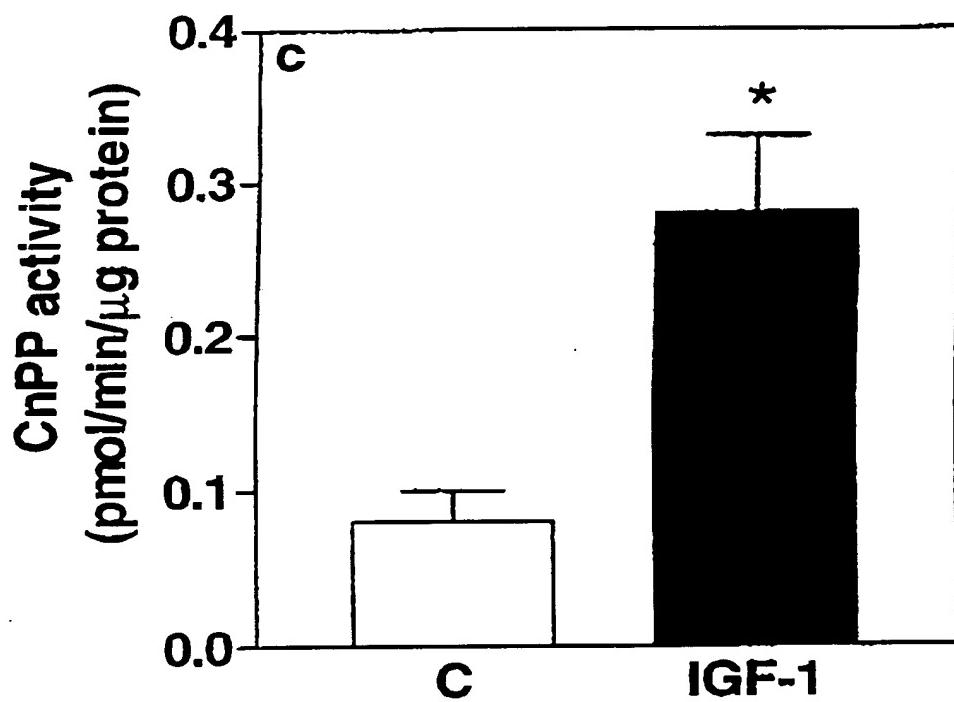


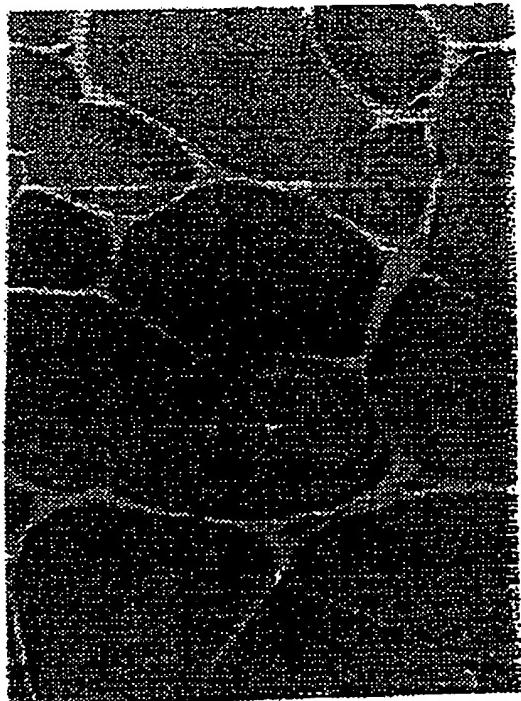
FIGURE 23C

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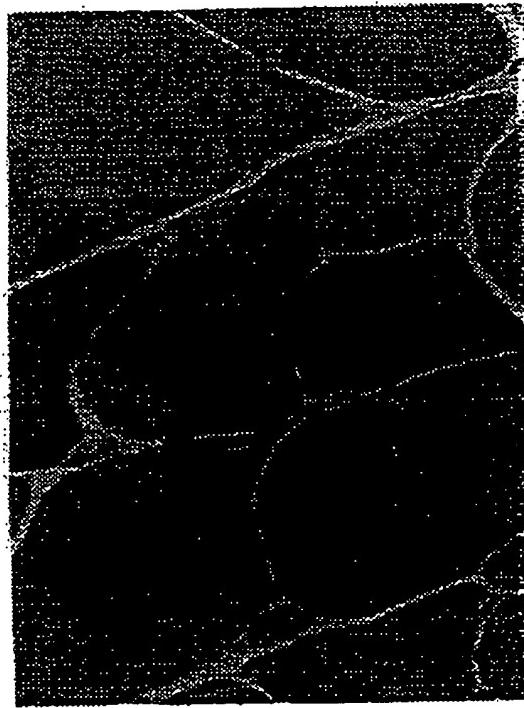
PCT/AU99/00220

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DEPARTMENT OF SCIENCE



Control



IGF-1

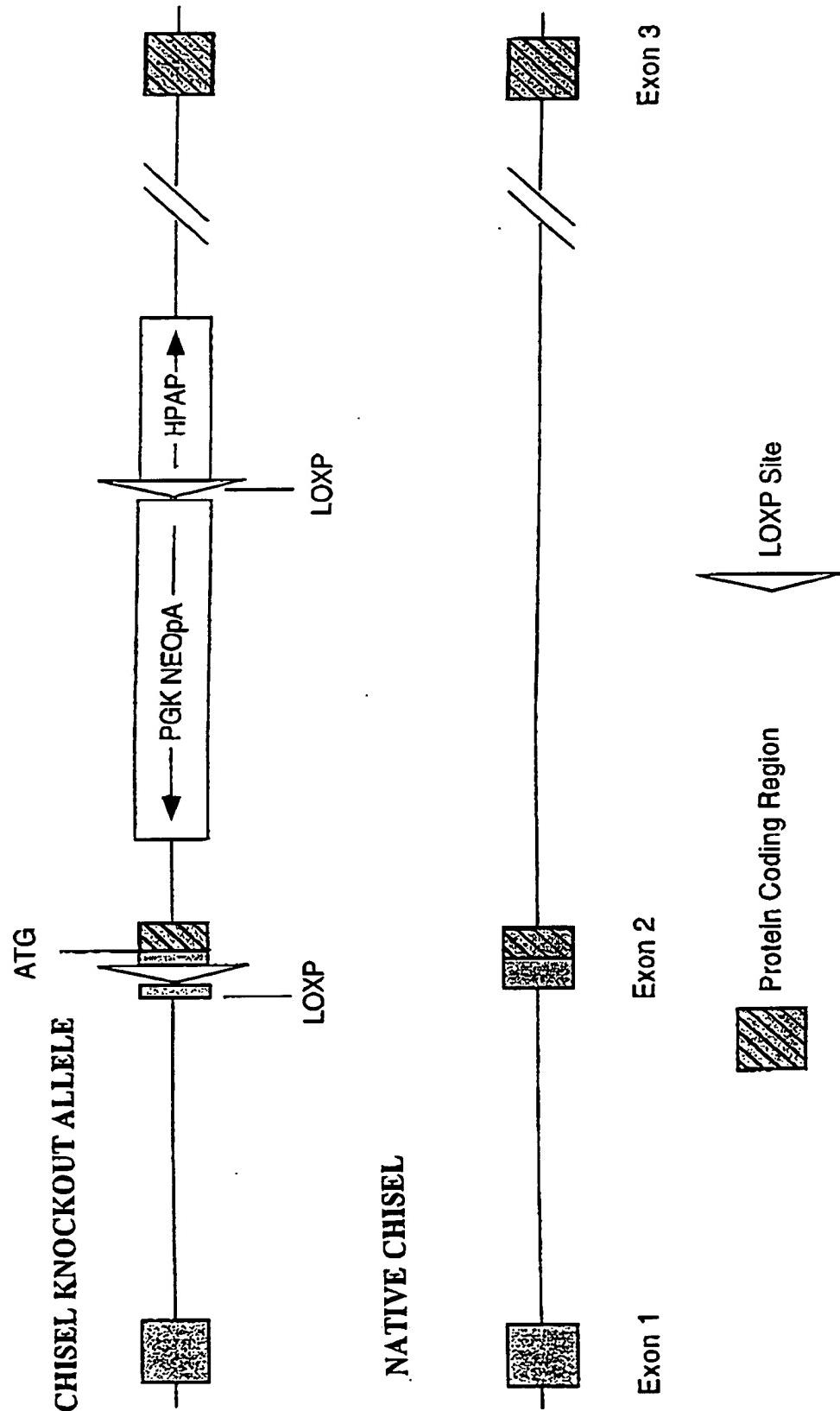
FIGURE 23D

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FIGURE 24



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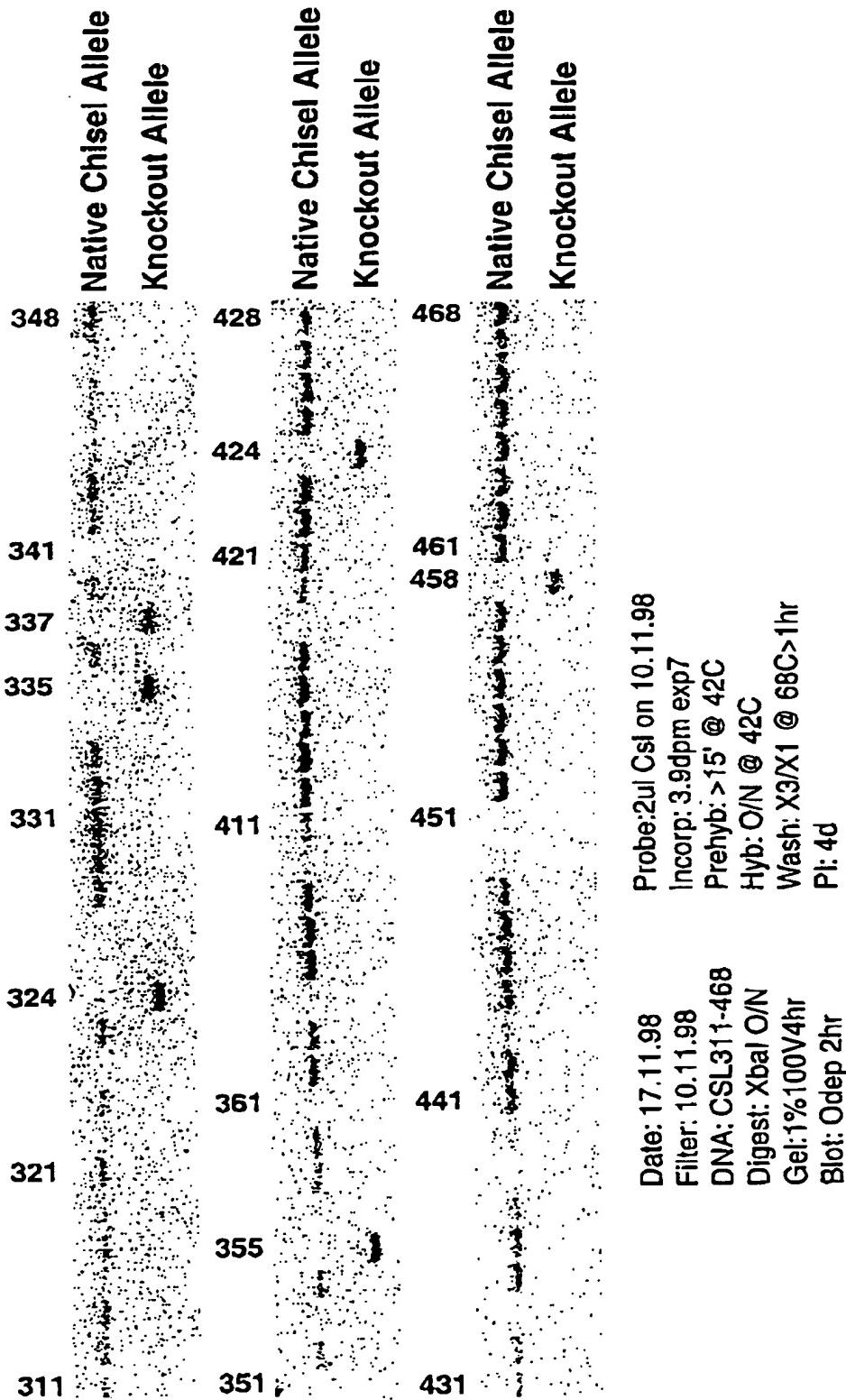


FIGURE 25